dergoing therapeutic plasmapheresis show great difficulty in driving the platelet count below 50×10^9 per liter (50,000 per μl) in patients with intact marrow function. Most important, the hypothesis that giving platelets prophylactically will make a difference in seriously injured, heavily transfused patients has been tested in a randomized prospective trial in Seattle. There was little effect of the prophylactic administration of platelets on the platelet count and no effect on any criterion for bleeding.

The main reason to be selective is that the use of fresh frozen plasma and platelets can transmit serious or lethal infections. The acquired immunodeficiency syndrome has the public's attention at the moment. More important is transfusion-transmitted non-A, non-B hepatitis. It is highly doubtful that the prophylactic administration of fresh frozen plasma and platelets in most transfused injured patients does more good than harm, an opinion recently affirmed by the consensus conferences of the National Institutes of Health.

A recognition of the risk of disease transmission with transfusion has altered the practice of most trauma surgeons. There is now greater emphasis on blood salvaging techniques and autotransfusion. There is general acceptance that lower hematocrits are safe in the average young trauma patient, and the old rule of giving "2 units" of blood automatically when a transfusion is required has been—or should be—abandoned. Many surgeons now question the wisdom of the nonoperative management of solid organ injuries, as patients with these injuries average twice the number of transfusions as those treated surgically.

M. MARGARET KNUDSON, MD
JOHN A. COLLINS, MD
Stanford, California

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Surgical Treatment of Peptic Ulcer Disease

ALTHOUGH THE FREQUENCY of hospital admissions for peptic ulcer disease was decreasing even before the introduction of H_2-receptor antagonists in the United States in 1977, since 1977 the number of operations for peptic ulcer disease has decreased considerably. In addition to H_2-receptor antagonists, sucralfate (a surface-active agent) has been increasingly used in recent years for the medical management of peptic ulcer disease. In the near future, proton pump blockers will provide nearly complete control of acid secretion. In the face of improved medical management, the nature of the surgical treatment of peptic ulcer disease has changed. Overall, fewer operations are being done than in previous years. A greater percentage of patients are being operated on for the complications of peptic ulcer disease—hemorrhage, perforation, and pyloric obstruction—than for intractable peptic ulcer disease. Those patients who are treated surgically tend to be older and sicker than in previous years, with resultant increased morbidity and mortality.

In addition to the classic operations for peptic ulcer disease—antrectomy with truncal vagotomy and truncal vagotomy with a drainage procedure—the proximal gastric vagotomy (PGV) has been increasingly used for peptic ulcer disease over the past few decades. Although its recurrence rate approaches 15%, the PGV offers less postoperative morbidity (diarrhea and dumping) than the classic operations. For this reason, many consider it the operation of choice for intractable, uncomplicated duodenal ulcer disease. The PGV is also being increasingly used in patients with perforated duodenal ulcers who are considered candidates for a definitive ulcer operation at the time of plication. It has been recommended by some investigators for use in bleeding or obstructing duodenal ulcers and in gastric ulcers but still must be viewed as unproved in these cases. For bleeding duodenal ulcers, oversewing of the bleeding vessel with the truncal vagotomy and pyloroplasty or truncal vagotomy and antrectomy remains the standard. For obstructing duodenal ulcer, a truncal vagotomy and gastrojejunostomy or truncal vagotomy and antrectomy remain the standard operations. For type I gastric ulcers—those to the left of the gastric angulus without associated pyloric or duodenal disease—antrectomy without vagotomy remains the standard operation. For prepyloric ulcers, the PGV has a high recurrence rate, and most surgeons would favor the use of a truncal vagotomy and antrectomy.

Although surgical practice in peptic ulcer disease has changed in recent years, general surgeons must be familiar with all of the operations for peptic ulcer disease and tailor the operation to the given situation of each patient.

RICHARD A. CRASS, MD
Portland

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Vascular Endoscopy

ENDOSCOPY OF THE VASCULAR SYSTEM has evolved over recent years from an experimental research procedure to a sophisticated diagnostic and therapeutic adjunct for surgical or percutaneous interventions of the peripheral vascular and coronary circulation. Advances in fiber optics and medical electronic imaging systems now allow the production of flexible angioscopy catheters, which incorporate a fluid irrigation channel, in diameters of 2 mm. Ultrafine instruments down to 0.2 mm are also being investigated.

Intraoperative angioscopy is done by introducing the endoscopic catheter through the vessel incision made for a bypass or other procedures. An objective lens transmits the image through a coherent bundle of several thousand quartz fibers to a video camera and magnification system, with a color image projected onto a TV monitor. Flushing of a heparinized saline solution through the irrigation channel clears blood from the field of view and provides a superb three-dimensional view of the vessel interior.

Applications include the verification or further elucidation of ambiguous angiogram abnormalities—including more accurately estimating the severity of stenosis and plaque morphology and differentiating thrombotic occlusion from atherosclerotic processes—the inspection of anastomotic suture lines to exclude technical faults, the identifica-